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TRA	NSMITTAL FORM  Correspondence after initial filing)	App Filin Firs Art	required to respond to a collection plication Number ing Date	and Tra n of infor 10/605,9 11/10/20	PTO/SB/21 (08-03) Approved for use through 08/30/2003. OMB 0651-0031 d Trademark Office; U.S. DEPARTMENT OF COMMERCE information unless it displays a valid OMB control number. 605,965 10/2003 un-Yao Chen			
Total Number of Page	es in This Submission	Atte	omey Docket Number	ОТМР0	056USA			
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Amendment/F  After F  Affidate  Extension of T  Express Aban  Information Di  Certified Copy Document(s)  Response to I Incomplete Ap	ttached Reply Final vits/declaration(s) Fime Request Indonment Request isclosure Statement y of Priority  Missing Parts/	Drawi Licens Petitic Provis Powe Chang Termi	ing(s) sing-related Papers			After Allowance communication to Technology Center (TC)  Appeal Communication to Board of Appeals and Interferences Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)  Proprietary Information  Status Letter Other Enclosure(s) (please Identify below):		
	SIGNATUR	E OF A	APPLICANT, ATTORNE	EY, OI	R AG			
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DEC 1 9 2003 331

PTO/SB/17 (10-03)

Approved for use through 07/31/2006. OMB 0651-0032

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE action Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

# FEE TRANSMITTAL for FY 2004

Effective 10/01/2003. Patent fees are subject to annual revision.

Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT

Signature

(\$)	0.	00
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Co	Complete if Known						
Application Number	10/605,965						
Filing Date	11/10/2003						
First Named Inventor	Chun-Yao Chen						
Examiner Name							
Art Unit							
Attorney Docket No.	OTMP0056USA						

Date

METHOD OF PAYMENT (check all that apply)				FEE	ECALCULATION (continued)	· · · · · · · · · · · · · · · · · · ·
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Account Number 50-0801	1051	130	2051		Surcharge - late filing fee or oath	Fee Paid
Deposit	1052	50	2052		Surcharge - late provisional filing fee or	
Account Name					cover sheet	
The Director is authorized to: (check all that apply)	1053	130	1053		Non-English specification	
Charge fee(s) indicated below Credit any overpayments	1812 2	-		_	For filing a request for ex parte reexamination	
Charge any additional fee(s) or any underpayment of fee(s)	1804	920*	1804		Requesting publication of SIR prior to Examiner action	
Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.	1805 <sup>-</sup>	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action	
*****	1251	110	2251	55	Extension for reply within first month	
FEE CALCULATION	1252	420	2252	210	Extension for reply within second month	
1. BASIC FILING FEE Large Entity Small Entity	1253	950	2253		Extension for reply within third month	
Fee Fee Fee Fee Description Fee Paid	1254	1,480	2254	740	Extension for reply within fourth month	
Code (\$) Code (\$) 1001 770 2001 385 Utility filing fee	1255	2.010	2255	1.005	Extension for reply within fifth month	
1001 770 2001 385 Utility filing fee 1002 340 2002 170 Design filing fee	1401	330	2401	_	Notice of Appeal	
1002 546 2002 176 Design liling fee	1402	330	2402		Filing a brief in support of an appeal	,
1004 770 2004 385 Reissue filing fee	1403	290	2403		Request for oral hearing	
1004 776 2004 303 Reissde liling fee	1451		1451		Petition to institute a public use proceeding	
	1452	110	2452		Petition to revive - unavoidable	
SUBTOTAL (1) (\$) 0.00	1453		2453		Petition to revive - unintentional	
2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE	1501	Ť	2501		Utility issue fee (or reissue)	
Fee from Ext <u>ra Claims below</u> Fee Paid		480	2502		Design issue fee	
Total Claims = X =	1503	640	2503		Plant issue fee	
Independent Claims - 3** = X =	1460	130	1460	130	Petitions to the Commissioner	
Multiple Dependent =	1807	50	1807	<b>7</b> 50	Processing fee under 37 CFR 1.17(q)	
Large Entity   Small Entity	1806	180	1806	180	Submission of Information Disclosure Stmt	
Fee Fee Fee <u>Fee Description</u> Code (\$)	8021	40	8021	40	Recording each patent assignment per	
1202 18 2202 9 Claims in excess of 20	1809	770	2809	385	property (times number of properties) Filing a submission after final rejection	<del></del>
1201 86 2201 43 Independent claims in excess of 3					(37 CFR 1.129(a))	
1203 290 2203 145 Multiple dependent claim, if not paid	1810	770	2810	385	For each additional invention to be	
1204 86 2204 43 ** Reissue independent claims over original patent	1801	770	2801	385	examined (37 CFR 1.129(b))  Request for Continued Examination (RCE)	
1205 18 2205 9 ** Reissue claims in excess of 20	1802	900	1802	900	· · · · · · · · · · · · · · · · · · ·	<b></b>
and over original patent					of a design application	
SUBTOTAL (2) (\$) 0.00	Other f	• •		-		
**or number previously paid, if greater; For Reissues, see above	*Reduc	ced by	Basic F	Filing F	ee Paid SUBTOTAL (3) (\$) 0.00	
SUBMITTED BY					(Complete (if applicable))	
Name (Print/Type) Winston Hsu	Re	egistra	tion No.	41.	526 Telephone 886289237350	)

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DEC 1 9 2003 33

PTO/SB/02B (11-00)

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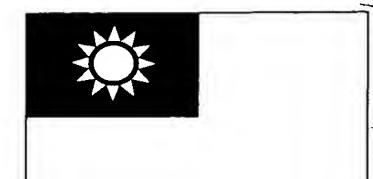
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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### **DECLARATION** — Supplemental Priority Data Sheet

Additional foreign app	lications:			
Prior Foreign Application Number(s)	,	Foreign Filing Date (MM/DD/YYYY)	Priority Not Claimed	Certified Copy Attached? YES NO
091221017	Taiwan, R.O.C.	12/19/2002		
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Burden Hour Statement: This form is estimated to take 21 minutes to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.



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## 中華民國經濟部智慧財產局

INTELLECTUAL PROPERTY OFFICE MINISTRY/OF ECONOMIC AFFAIRS - REPUBLIC OF CHINA

兹證明所附文件,係本局存檔中原申請案的副本,正確無訛,

其申請資料如下

This is to certify that annexed is a true copy from the records of this office of the application as originally filed which is identified hereunder:

申 請 日:西元<u>2002</u>年<u>12</u>月<u>19</u>日 Application Date

申請案號:)091221017 Application-No.

申請人:中強光電股份有限公司 Applicant(s)



發文日期: 西元 2003 年 8 月 6 日

Issue Date

發文字號: Serial No. 09220794890

申請日期:	IPC分類	
申請案號:		

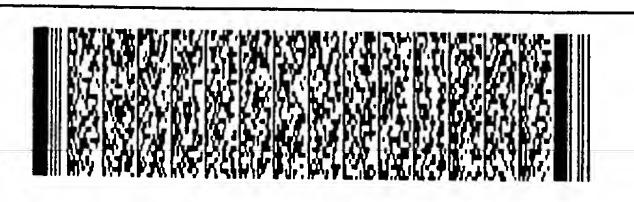
以上各欄	由本局填註) 新型專利說明書
	中文 調整裝置
<b>听型名稱</b>	Adjusting apparatus 英文
	姓名 1. 陳俊堯 (中文)
	姓名 (英文) 1. Chen Chun-Yao
創作人 (共1人)	圆籍 (中英文) 1. 中華民國 TW
	住居所 1. 新竹科學工業園區新竹市力行路11號 (中 文)
·	住居所 1. No 11, Li Hsing Rd, Science-Based Industrial Park, Hsinchu, Taiwan, R.O.C.
	名稱或 1. 中強光電股份有限公司 姓,名 (中文)
	名稱或 1. Coretronic Corporation 姓 名 (英文)
三、.	國籍(中英文)1.中華民國
申請人 共1人)	住居所 1. 新竹科學工業園區新竹市力行路11號 (本地址與前向貴局申請者相同) (營業所)
	住居所 1. No 11, Li Hsing Rd, Science-Based Industrial Park, Hsinchu, (營業所) Taiwan, R.O.C. (英文)
	代表人(中文)
	代表人 (英文)

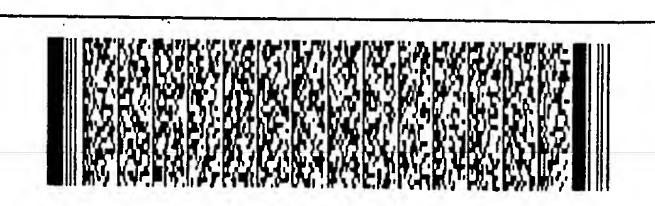


#### 一四、中文創作摘要 (創作名稱:調整裝置)

#### 陸、英文創作摘要 (創作名稱: Adjusting apparatus)

An adjusting apparatus comprises a base, a supporting frame, a fixing base, a slider, and a carrier. A light engine is installed on the upper surface of the carrier. Using the pins and slideslot for guiding, and screws for adjusting provides the linear movements for the light engine. The cambered surfaces of the slider and carrier for guiding, and an adjusting element for moving a protruding part of the carrier provides the rotating movements for the light engine. Therefore the light beam of light engine could

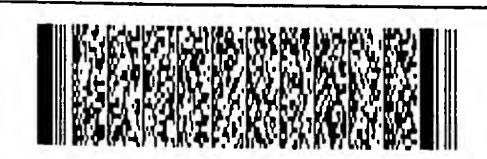




-四、中文創作摘要 (創作名稱:調整裝置)

陸、英文創作摘要 (創作名稱: Adjusting apparatus)

emit into a screen precisely via the adjusting apparatus to obtain the optimum projection result.



。四、中文創作摘要 (創作名稱:調整裝置)

伍、(一)、本案代表圖為:第\_\_\_3\_\_\_圖

(二)、本案代表圖之元件代表符號簡單說明:

調整裝置 20 基座 21

支撑架 22 固定座 23

滑座 24 承載座 25

陸、英文創作摘要 (創作名稱: Adjusting apparatus)



-一、本案已向				
國家(地區)申請專利	申請日期	案 號	主張專利法第一百零五條準戶 第二十四條第一項優先權	A /
•				
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二、□主張專利法第一百	「零五條準用第二十	五條之一第一項	優先權:	
申請案號:		·		
日期:				
三、主張本案係符合專利	· 法第九十八條第一:		或□第二款但書規定之期間	
日期:	•			
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#### 五、創作說明(1)

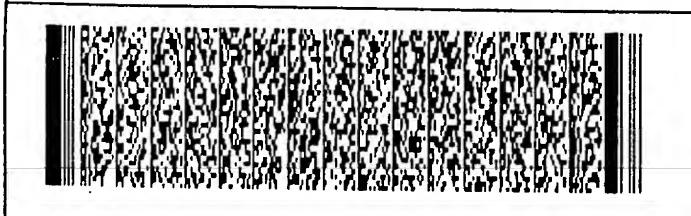
【新型所屬之技術領域】

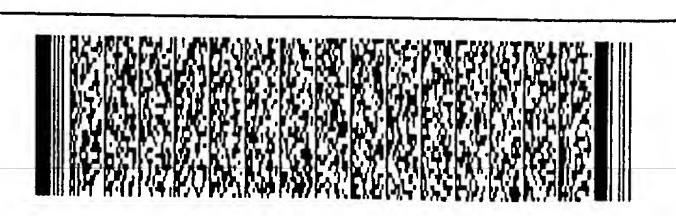
本創作係有關調整裝置,尤其係指一種可作角度及線性調整之調整裝置。

#### 【先前技術】

請參閱第1圖所示,習知背投影電視係包括一般體 1、及置於設置1內之光學投影系統,其中光學投影系統 包括光機2、光學鏡3、大反射鏡2所以 由光機2、影像光東並投射於光機2前端之反射鏡 由光機2產生一影像光東並投射於光機2前端之反射鏡 分,後於小反射鏡3之反射後2時後,投射於螢幕 以完成影像呈現。

請參閱第2圖所示,係習知光機調整裝置10包括一基座11、一升降螺栓12、依序設於基座11上之二滑座(13、14)及一旋轉座15;光機(圖未示)係承載於旋轉座15上,藉由旋轉升降螺栓12以調整光機高度;而二滑座(13、14)則利用設置於其





#### 五、創作說明 (2)

周緣之凸條131413、141計濟座(13、141)於職之凸條131,所限制滑座(13、141)於職數(25),所數(25),可數

#### 【新型內容】

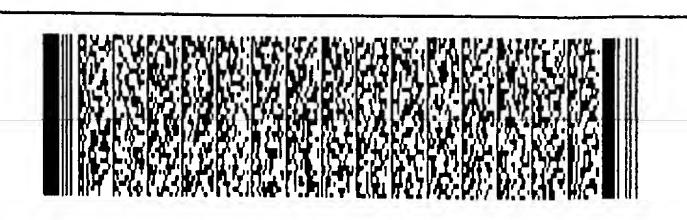
本創作之一目的,係提供一種調整裝置,藉由調整光機左右傾斜角,修正投影畫面旋轉角度及影像光束投射路徑,解決投影畫面歪斜及影像無法對正螢幕之問題,以改善投影效果。

本創作之另一目的,係提供一種調整裝置,可提供多軸向調整,達到簡化背投電視系統組裝。

本創作之另一目的,係提供一種調整裝置,可達到光機與小反射鏡之模組化。

為達上述目的,本創作之調整裝置包括基座,及依序層疊於基座上方之撐架、固定座、滑座及供承部門之承擊座上方架側面形成至少一翼部,且該翼部上開設有至少一導槽,該基座上具有至少一與導槽相端之口。一第三調整元件其一端卡擊於基座,另一螺型並帶動支撐架軸向位移,第三固定元件係鎖固連結該





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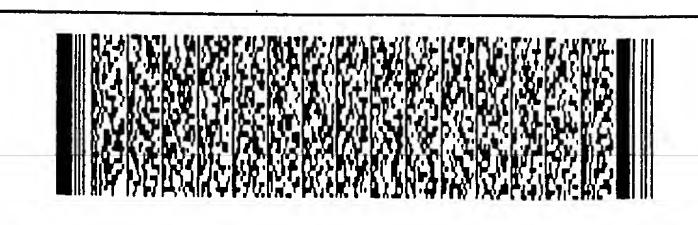
#### 五、創作說明 (3)

有關本創作為達到上述目的,所採用之技術手段及其餘功效,茲舉二較佳實施例,並配合圖式加以說明如下:

#### 第一實施例:

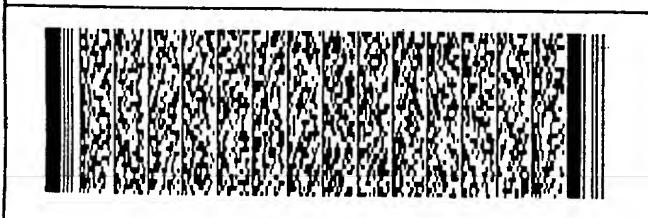
該支撑架22係承載於基座21上表面211,並具有一與基座21呈一傾斜角之頂面221、形成於頂

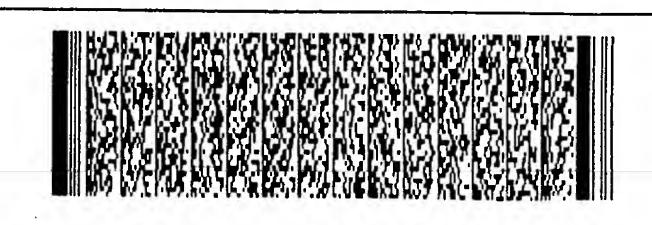




#### 五、創作說明 (4)

再參閱第3圖及第4圖所示,固定座23條利用鎖固元件231個設於支撐架22項面221,藉由傾斜之項面221使固定座23與基座21間 具有一傾斜角;固定座23月有一上表面232,且其上方設有複數個凸柱233及固定孔234,固定座23一側螺設





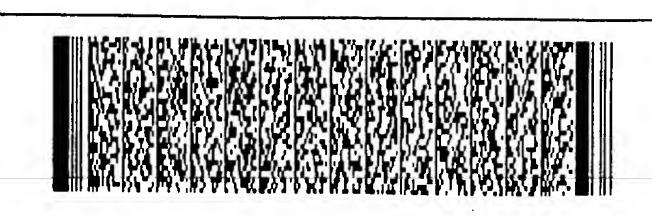
#### 五、創作說明 (5)

一承座235,承座235內部具有一容槽2351,一第一調整元件236係穿過承座235後,一端卡墊於承座235之容槽2351內。

該滑座24係承載於固定座23上表面232,且 其兩側形成左翼部241及右翼部242,右翼數個 1243A,以及指數個供第一固定元件244種 243A,以及複數個供第一固定元件244種 243B;滑座24個面上相對於固定定件 235後方設有一螺孔245,第一定23 6一端平行滑槽243A方向穿過固定座23螺孔245,以帶動滑座24沿滑槽243A方向移動。

再参閱第3圖及第4圖所示,該滑座24中心凸設一框體248,框體248上表面246為一圓弧面並





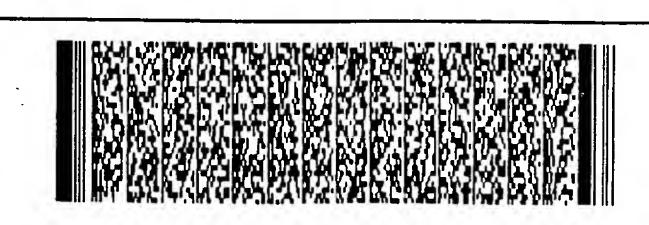
#### 五、創作說明 (6)

於中心開設一長方形槽孔247,框體248兩側面開設有與槽孔247相連通之螺孔249,第二調整元件253係穿於螺孔249,框體248端面係設有固定孔2481。

25係設於滑座24圓弧面上方,且承載 5下表面 4配合滑座24凹圆弧面而設為凸 2 5 2 5 雨端面分固設一圓弧板 承載座 2 5 6 6 設依滑 2 4 座 圓弧面曲率開設有 弧 槽 圓 圓弧槽2561位置係相對於滑座24 固 定孔 , 第二固定元件257係穿過 圓弧槽 2 5 定 孔 2 81以固定承載座 4 2 5 , 圓弧板2 側面凸設有複數個支撑柱256 2, 藉由支撐柱 2 夾住框體248上表面,使承載座25與滑座 下表面254相對於槽孔247位置凸設 成滑動連結 , 且凸塊255係小於長方形槽孔 5 並容置於該槽孔247內,使第二調整元件253 一端可抵制於凸塊255

圖所示,調整裝置之作動情形,當 第 6 閱 5 時 由轉 使承載座25 5 5 25之左右傾斜角 而達到調 整承載座 度; 第二固定元件2 57後再反方向旋轉第二調 後鎖固即可完成; 預定位置 由上使調 另外 ,當光機光軸中心置於滑 整





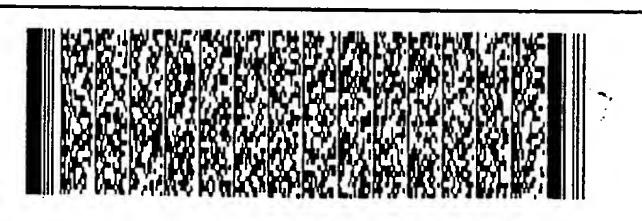
#### 五、創作說明 (7)

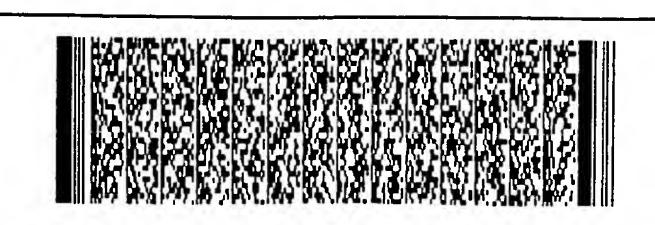
4圓弧面曲率中心時,即可藉由轉動第二調整元件253使光機繞著其光軸中心旋轉,達到調整投影畫面旋轉角度,以改善投影畫面歪斜及影像無法對正螢幕之問題

因此,當光機固設於承載座25上表面251後,則可分別藉由旋轉第一調整元件236、第二調整元件253及第二調整元件215,快速調整光機位置及傾斜角度,使光機提供之影像光束可準確投射至螢幕,而達到最佳投影效果。

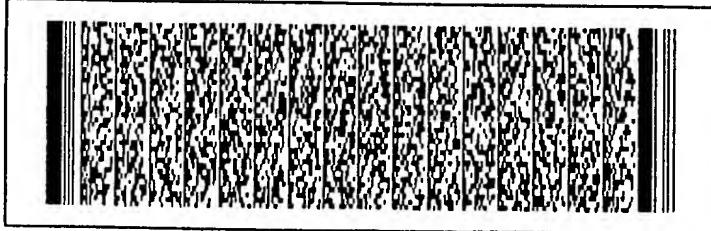
另外,請參閱第7圖所示,該支撐架22頂面22 1兩側分別凸設一連結板227,以供螺設背投電視採用之小反射鏡3使小反射鏡3可與光機結合成一模組,再裝置於背投電視內以簡化組裝程序。 第二實施例:

請參閱第8圖及第9圖所示,係本創作第二實施例





#### - 五、創作說明 (8)



#### 圖式簡單說明

#### 【圖式簡要說明】

第1圖,係習知背投影電視之光學投影系統圖。

第2圖,係習知光機調整裝置立體示意圖。

第3圖,係本創作第一實施例之調整裝置立體圖。

第4圖,係本創作第一實施例之調整裝置爆炸圖

第5圖,係本創作調整裝置之軸向調整示意圖。

第6圖,係本創作調整裝置之角度調整示意圖。

第7圖,係本創作調整裝置與反射鏡結合示意圖。

第8圖,係本創作第二實施例之調整裝置立體圖。

第9圖,係本創作第二實施例之調整裝置爆炸圖。

#### 【圖號簡要說明】

調 整 裝 置 2 0

基 座 2 1

上表面 211

凸柱 212

固定孔 213

承座 214

第三調整元件 215

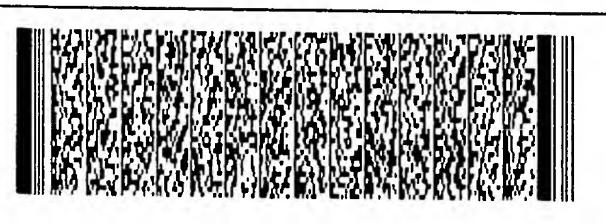
支撑架 22

項面 221

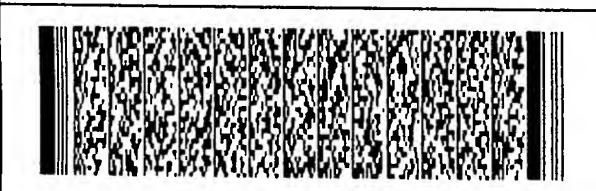
左翼部 222

右 翼 部 2 2 3

導槽 224A、224B 第三固定元件 225

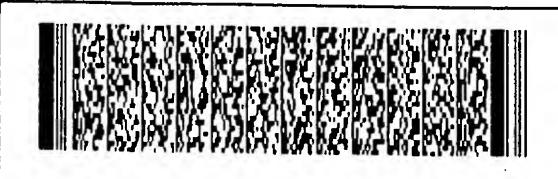


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圖式簡單	說明	Ą												
調	整	孔				2	2	6						
連	結	板				2	2	7						
固	定	座				2	3							
鎖	刮	元	件			2	3	1						
上	表	面				2	3	2						
凸	柱					2	3	3						
甚	定	孔				2	3	4						
承	座					2	3	5						
第		調	整	元	件	2	3	6						
滑	座					2	4							
左	異	部				2	4	1						
右	異	部				2	4	2						
滑	槽					2	4	3	A	`	2	4	3	В
第		固	定	元	件	2	4	4						
螺	孔					2	4	5						
上	表	面				2	4	6						_
長	方	形	槽	孔		2	4	7						•
框	贈	•				2	4	8						
螺	孔					2	4	9						
承	載	座				2.	5							
上	表	面				2	5	1			•			
	定					2	5	2						
第		調	整	元	件	2	5	3						
下	表	面				2	5	4						



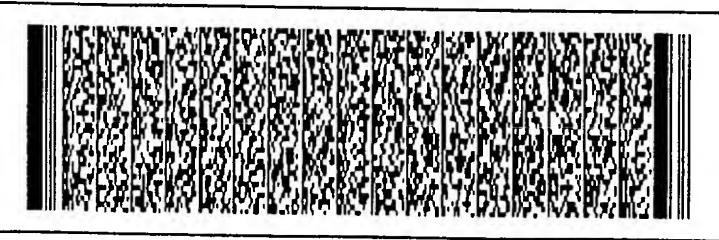
#### - 圖式簡單說明

凸 3	塊						2	5	5
圓	派	板					2	5	6
第 -		固	定	元	件		2	5	7
調	整	裝	置				3	0	
基)	座					٠	3	1	
上	表	面					3	1	1
第二	= '	調	整	元	件		3	1	5
支力	学	架					3	2	
頂	面						3	2	1
固分	定	座					3	3	
第 -		調	整	元	件		3	3	6
滑力	奎			•			3	4	
承	鈛	座					3	5	
第 -		調	整	元	件		3	5	3



#### 六、申請專利範圍

- 1、一種調整裝置,包括:
  - 一固定座, 係具有一上表面並設有至少一凸柱;
  - 一滑座,係承載於該固定座上表面且其側面形成至
  - 少一翼部,該翼部相對應凸柱開設有滑槽,該滑座上表面為一圓弧面並開設有一槽孔,並設有至少一
  - 第一固定元件鎖固連結該滑座於固定座上;
  - 至少一第一調整元件,其一端卡摯於固定座,另一
  - 端螺設於該滑座;
  - 一承載座,係設於該滑座圓弧面上方,且其下表面與滑座圓弧面相配合並相對於該槽孔設一凸塊,並設有至少一第二固定元件鎖固連結該承載座與滑座;以及
  - 至少一第二調整元件,係穿過該滑座且其一端抵制於該凸塊。
- 2、如申請專利範圍第1項所述之調整裝置,該承載座上表面可供承載一光機者。
- 3、如申請專利範圍第1項所述之調整裝置,更包括:
  - 一基座,係設於該固定座下方;以及
  - 一支撑架,係設於該基座與該固定座間,且該支撑架頂面與該固定座相連結。
- 4、如申請專利範圍第3項所述之調整裝置,其中該支撑架項面與基座間具有一傾斜角者。
- 5、如申請專利範圍第3項所述之調整裝置,其中該支撑架頂面與基座平行者。



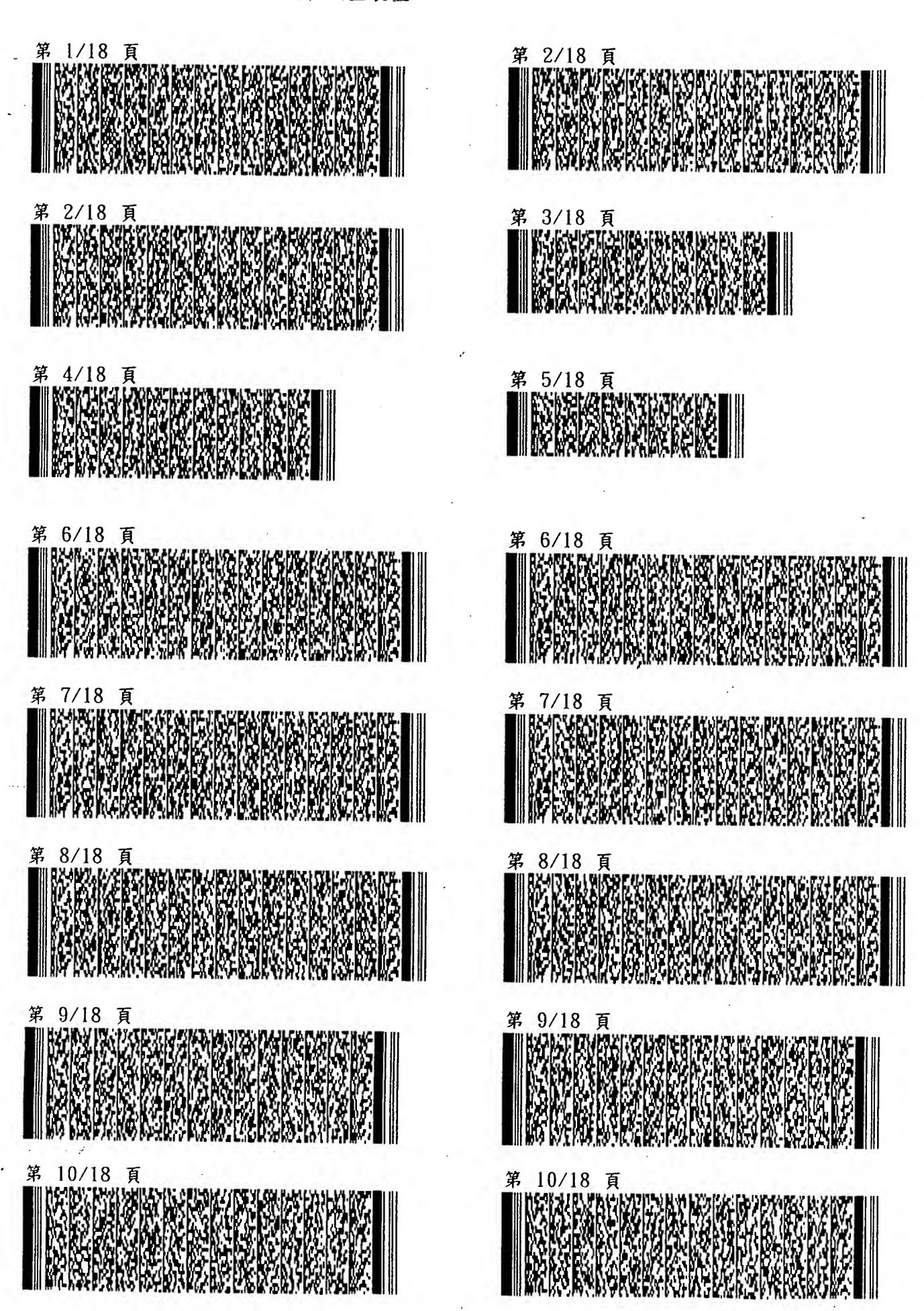
#### 六、申請專利範圍

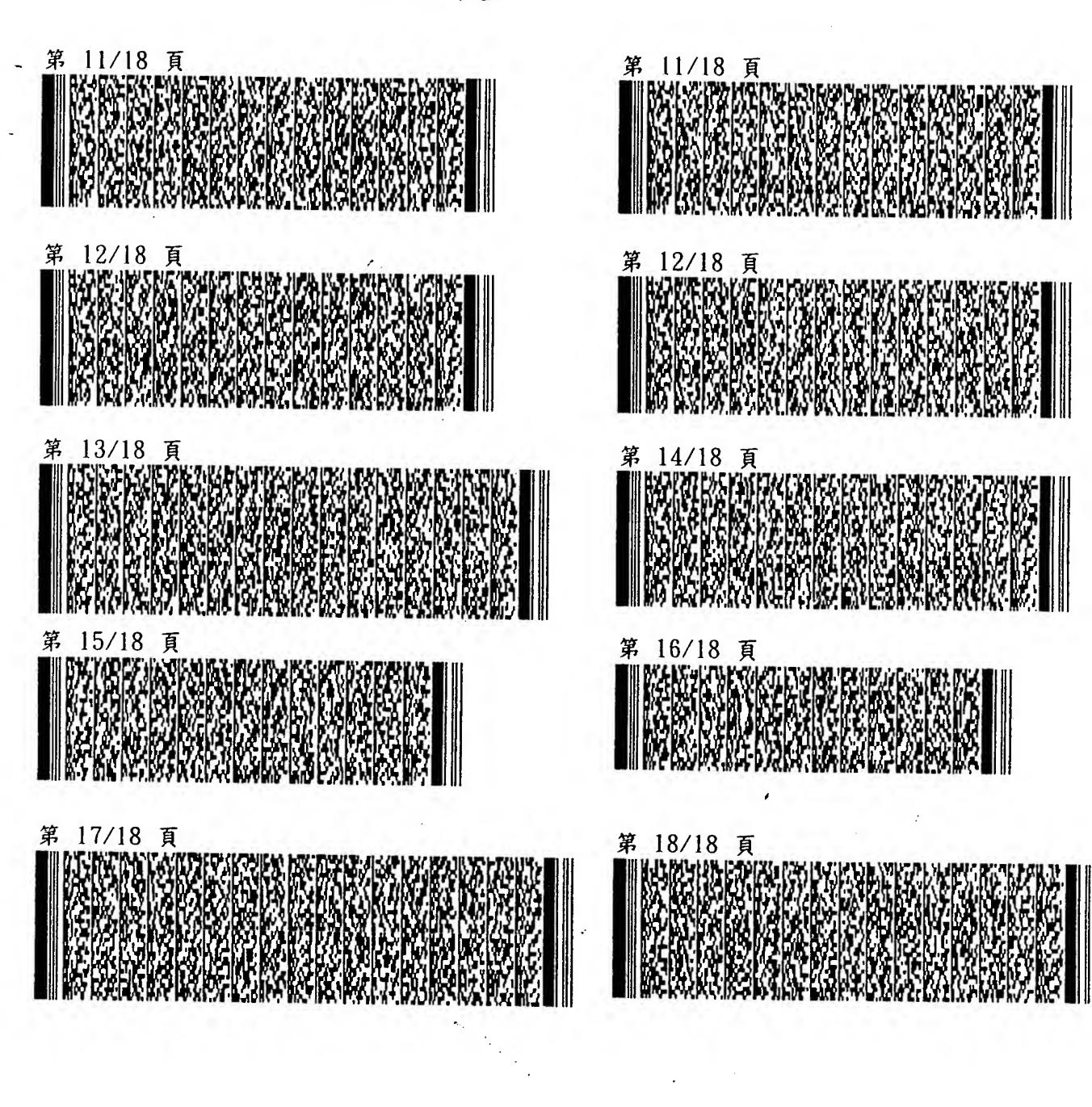
- 6、如申請專利範圍第3項所述之調整裝置,其中該支撑架頂面兩側分別凸設一連結板,以供連結一反射鏡。
- 7、如申請專利範圍第3項所述之調整裝置,其中該支撑架側面形成至少一翼部,且該翼部上開設有至少一導槽,該基座上具有至少一與導槽相配合之凸柱
- 8、如申請專利範圍第7項所述之調整裝置,其中更包括至少一第三調整元件,其一端卡擊於基座,另一端螺設於該支撑架;以及

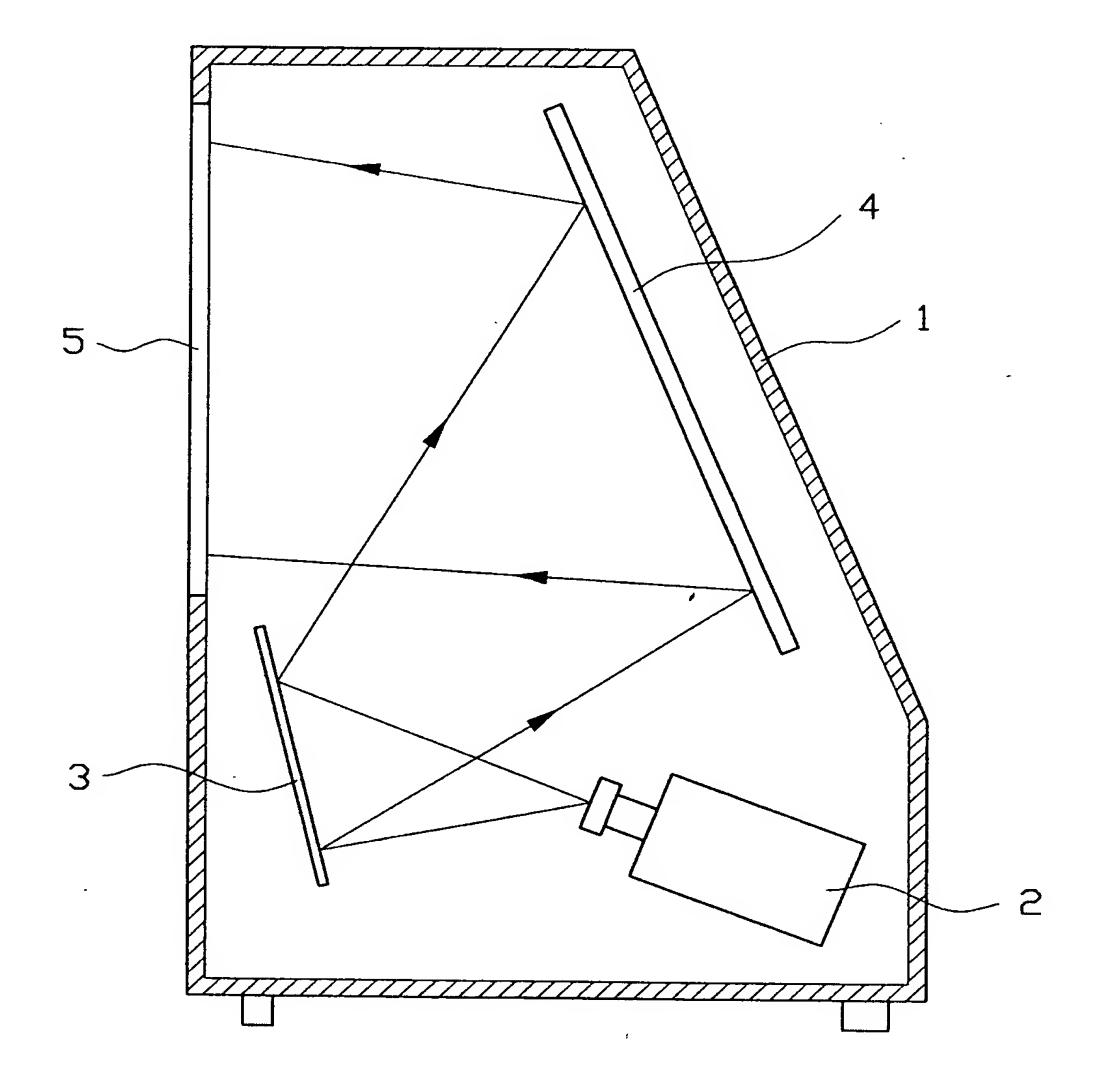
至少一第三固定元件,係鎖固連結該支撐架及基座

- 9、如申請專利範圍第7項所述之調整裝置,其中該支撑架其導槽方向係垂直於滑座其滑槽方向者。
- 1 0 · 如申請專利範圍第1所述之調整裝置,其中該承載座前後端面分固設有一圓弧板,並於圓弧板上開設有導引用之圓弧槽。

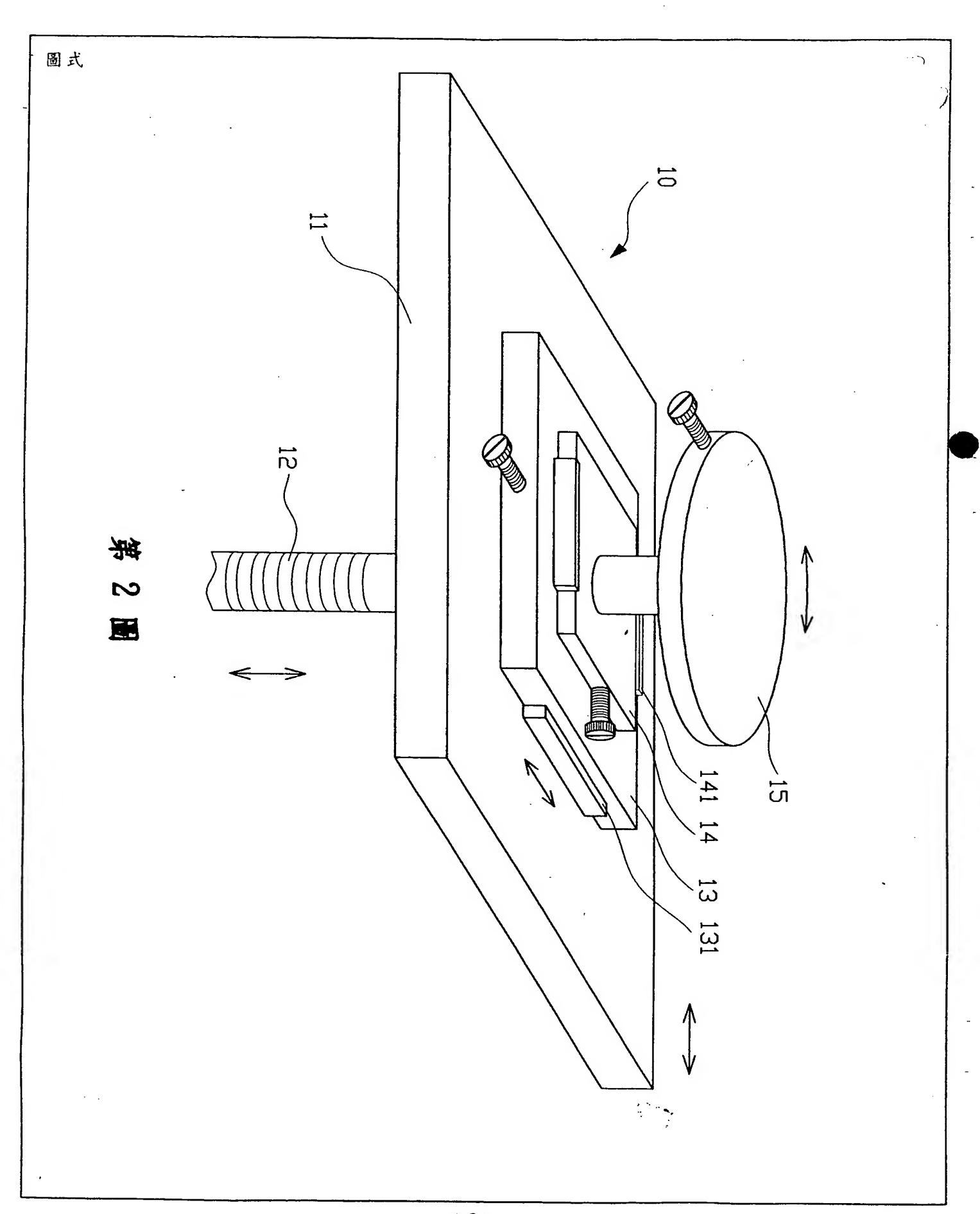


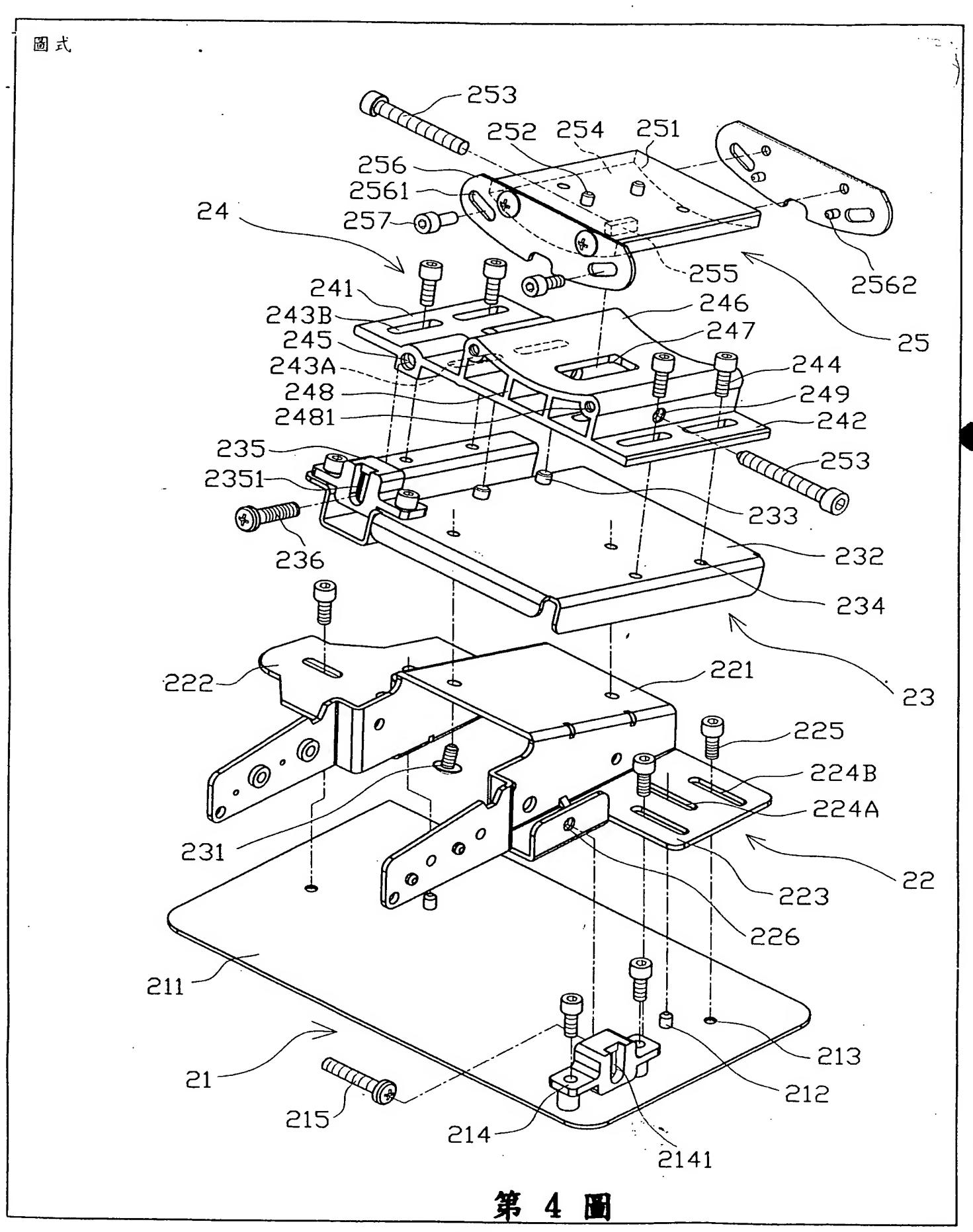






第 1 圖





第22頁

